What is claimed is:

1. A fluid dynamic bearing assembly that provides improved axial alignment and reduced operating thrust gap variation comprising:

   -a sleeve having at least one set of asymmetric journal bearing grooves thereon;

   -a shaft adjacent the sleeve and having a regulating region, wherein when the shaft and the sleeve are aligned, the regulating region and the asymmetric journal bearing grooves generate nominal net journal asymmetry pressure and when the shaft and the sleeve are not aligned the regulating region and the asymmetric bearing grooves generate increased journal asymmetry pressure or decreased journal asymmetry pressure.

2. The fluid dynamic bearing assembly of claim 1, wherein the regulating region is a regulating groove or step.

3. The fluid dynamic bearing assembly of claim 2, wherein the regulating groove is a shallow regulating groove such that the opposite journal bearing groove pumping action is diminished.

4. The fluid dynamic bearing assembly of claim 1, wherein there are two sets of asymmetric bearing grooves.

5. The fluid dynamic bearing assembly of claim 1, further comprising at least one set of symmetric journal bearing grooves.

6. A fluid dynamic bearing assembly that provides improved axial alignment and reduced operating thrust gap variation comprising:

   -a shaft having at least one set of asymmetric journal bearing grooves thereon;

   -a sleeve adjacent the shaft and having a regulating region, wherein when the sleeve and the shaft are aligned, the regulating region and the asymmetric journal bearing grooves generate nominal net journal asymmetry pressure and when the shaft and

the sleeve are not aligned the regulating region and the asymmetric bearing grooves generate increased net journal asymmetry pressure or decreased nominal net journal asymmetry pressure.

7. The fluid dynamic bearing assembly of claim 6, wherein the regulating region is a regulating groove or step.

8. The fluid dynamic bearing assembly of claim 7, wherein the regulating groove or step is sufficient to disable the opposite to the journal bearing groove.

9. The fluid dynamic bearing assembly of claim 6, wherein there are two sets of asymmetric bearing grooves.

10. The fluid dynamic bearing assembly of claim 6, further comprising at least one set of symmetric bearing grooves.

11. A fluid dynamic bearing assembly comprising:

-a shaft; and

-a sleeve adjacent the shaft; wherein one of the shaft or the sleeve has at least one set of asymmetric journal bearing grooves thereon; wherein the other of the shaft or the sleeve has regulating means for axially aligning the sleeve with the shaft; and wherein when the sleeve and the shaft are aligned, the regulating means and the asymmetric journal bearing grooves generate nominal net journal asymmetry pressure and when the shaft and the sleeve are not aligned the regulating means and the asymmetric bearing grooves do not generate nominal net journal asymmetry pressure.

12. The fluid dynamic bearing assembly of claim 11, wherein the regulating means is a regulating groove or step.

13. The fluid dynamic bearing assembly of claim 12, wherein the regulating grooves are shallow grooves or deep grooves.

14. The fluid dynamic bearing assembly of claim 11, wherein there are two sets of asymmetric bearing grooves.

15. The fluid dynamic bearing assembly of claim 11, further comprising at least one set of symmetric bearing grooves.

16. The fluid dynamic bearing assembly of claim 11, wherein the asymmetric bearing grooves are located on the sleeve and the regulating means is located on the shaft.

17. The fluid dynamic bearing assembly of claim 11, wherein the asymmetric bearing grooves are located on the shaft and the regulating means is located on the sleeve.

18. A method for providing axial displacement feedback between a shaft and a sleeve defining a fluid dynamic bearing assembly, comprising;

-providing at least one set of asymmetric bearing grooves on either the shaft or the sleeve; and

-providing regulating means for axially aligning the sleeve with the shaft; wherein when the sleeve and the shaft are aligned, the regulating means and the asymmetric bearing grooves have nominal net asymmetry and when the shaft and the sleeve are not aligned the regulating means and the asymmetric bearing grooves generate increased or decreased net asymmetry pressure.

19. The method of claim 18, wherein the regulating means is a regulating groove or step.

20. The method of claim 19, wherein the regulating groove or step is opposite and offset from the asymmetric bearing grooves.